REMARKS/ARGUMENTS

This amendment is being filed in response to the Office action mailed June 15, 2006. Reexamination and reconsideration of the application as amended and in view of the remarks herein is respectfully requested.

Elections/Restrictions

Applicant hereby affirms the provisional election without traverse made on May 12, 2006, as indicated in paragraph 5 of the Official Action. To expedite prosecution, withdrawn claims 140-141 have been cancelled without prejudice. These claims may be prosecuted in a divisional application.

Amendments to the Claims

Applicant notes, with appreciation, the indicated allowability of claim 48 if rewritten in independent form. Applicant has rewritten claim 48 in independent form by incorporating the limitations thereof into independent claim 45 and cancelling claims 47-48. Claims 49, 52, 57, 62, 66, 69 and 70 have been amended for consistency with the amendments to claim 45, and claims 54-55 have been amended to substitute the term "apparatus" for amplitude modulator. Independent claim 45 and the claims that depend therefrom, i.e. claims 46 and 50-72, are believed to be in a condition for allowance.

Independent apparatus claims 73, 103 and 131 have been amended herein to recite an "amplitude adjustment mechanism" (claim 73) or "means for" (claims 103 and 131) "selectively adjusting the amplitude modulation imparted to said optical signal by said amplitude modulator." Independent method claim 95 has been amended to recite "selectively adjusting the degree of amplitude modulation imparted to said data modulated signal." These limitations are similar to limitations found in original claims 79-80, 97 and 105. As such, Applicant believes no new search should be required.

Claims 79-80 and 97 have been cancelled, and claims 105-106 have been amended for consistency with the amendments to claims 73, 95 and 103. New claims 142-143 have been added. No new matter has been added in connection with any of the amendments herein.

35 U.S.C. §102

Claims 45-47, 49, 59-53, 56-57, 60-63, 73-78, 81-82, 85-88, 95-96, 99-100, 131-132 and 135-138 have been rejected under 35 U.S.C. §102(e) as being anticipated by Taga et al. (U.S. Patent No. 5,872,647). In view of the amendment of claim 48 to incorporate the allowable subject matter of claim 48, and the amendments of claims 73, 95, 103 and 131 to incorporate limitations from claims 79-80, 97 or 105, the rejection under 35 U.S.C. §102(e) as being anticipated by Taga et al is believed moot. Applicants respectfully request therefore that this rejection be withdrawn upon reconsideration.

35 U.S.C. §103

The rejections of the claims depending from claim 45 are deemed moot in view of the amendment of claim 45 to incorporate the limitations of allowable claim 48. Also, in view of the amendments of claims 73, 95, 103 and 131 to incorporate limitations from claims 79-80, 97 or 105, the rejections of claims other than 79-80, 97 and 105 are deemed moot.

In paragraph 9 of the Official Action, claims 79-80 and 97 have been rejected under 35 U.S.C. § 103(a) as being obvious in view of Taga et al. In paragraph 15 of the Official Action, claim 105 has been rejected under U.S.C. § 103(a) as being unpatentable over Kitajima (U.S. Patent No. 5,515,196) in view of Taga et al. In making these rejections the Examiner argues:

> [I]t is well known in the art to adjust the degree of intensity modulation that is imparted to an optical signal. Therefore, it would have been obvious to one of ordinary skill in the art at the it would have been obvious for one of ordinary skill in the art at the time the invention was made to include means for selectively adjusting the degree of intensity modulation that is imparted to the optical signal in the system of Taga in order to adjust the duty cycle of the modulated signals. Page 7 of Official Action dated June 15, 2006, first full paragraph.

Applicant respectfully traverses these rejections.

As indicated at page 5, lines 1-13, page 7, lines 6-23, page 11, lines 6-24 and in FIGS. 2 and 5, a system or method as set forth in claims 73, 95, 103 and 131 including "selectively adjusting the amplitude modulation imparted to said data modulated signal" or means or an adjustment mechanism therefor, provides significant advantages. In particular, allowing for selective adjustment of the amplitude modulation, e.g. the depth of modulation as shown in FIG. 2, allows for optimization of individual channels in the system. As shown in FIG. 5, for example, channel 19 of 20 may exhibit a maximum Q-factor at a modulation depth of about 90%, whereas channel 3 of 20 may exhibit a maximum Q-factor at a modulation depth of about 40%. Allowing selective adjustment of the amplitude modulation facilitates setting the modulation to achieve a desired performance, e.g. maximum Q-factor.

Applicants find nothing in Taga that teaches or suggests "selectively adjusting" amplitude modulation in a system or method as set forth in claims 73, 95, 103 and 131. The Examiner argues only that it is well known to adjust the degree of intensity modulation imparted to an optical signal. There is nothing in the references cited by the Examiner that provides any suggestion or motivation to combine their teachings.

Of course, three criteria must be met to establish a *prima facia* case of obviousness:

(1) the combined references must teach or suggest all of the claimed limitations;

(2) there must be some suggestion or motivation in the references to combine the reference teachings; and

(3) there must be some expectation of success.

See, e.g., MPEP 2143; The Examiner has provided no statement or evidence of anything in the prior art that would have provided either: (1) a suggestion or motivation in the references to combine teachings of Taga with general knowledge of adjusting intensity modulation, or (2) any expectation of success. The Examiner argues only that "it is well known in the art to adjust the degree of intensity modulation that is imparted to an optical signal." Page 7 of Official Action dated June 15, 2006, first full paragraph. Apart from the merits of this argument, it is never sufficient for an Examiner to merely identify elements of the claims in the prior art.

Instead, the Examiner must provide a clear and particular showing of actual evidence of a suggestion, teaching, or motivation to combine references. Applicants respectfully submit the Examiner has not met this standard with respect to the subject matter of claims 73, 95, 103 and 131, as amended.

Applicants respectfully request, therefore, that the rejections of claims 73, 95, 103 and 131, as amended, under U.S.C. § 103(a) be withdrawn upon reconsideration. Claims 74-78, 81-94, 96, 98-102, 104-130, 132-139, and 142-144 depend, either directly or ultimately, from amended claims 73, 95, 103 or 131, and are allowable over the art of record by virtue of their dependency, as well as for their own limitations.

Double Patenting

Claims 45-139 have been rejected for obviousness-type double patenting over certain claims of U.S. Patent Nos. 5,946,119, 6,556,326 and 6,744,992. Applicants respectfully request that the double patenting rejections be held in abeyance pending consideration of the present amendments and remarks. In the event the Examiner agrees that the claims are in a condition for allowance over the art of record, Applicant will submit appropriate terminal disclaimers to obviate any remaining double-patenting rejections.

Early and favorable action is respectfully solicited. In the event there are any fee deficiencies, or additional fees are payable, please charge, or credit any overpayment to, our Deposit Account No. 50-2121.

RESPECTFULLY SUBMITTED,

/Donald J. Perreault/
Donald J. Perreault, Reg. # 40,126

Attorney for Applicants

Grossman, Tucker, Perreault & Pfleger, PLLC
55 South Commercial Street
Manchester, NH 03101
Phone: (603)668-6560; Fax: (603)668-2970